

REMARKS

In the above-referenced Office Action, the Examiner rejected claims 42-55. This Response cancels claims 49 and 54 and amends claims 42-44, 46, 50, 51, and 55. After entry of the foregoing amendments, claims 42-48, 50-53, and 55 (2 independent claims, 12 total claims) remain pending in the application. Reconsideration is respectfully requested.

Rejections under 35 U.S.C. § 112, ¶ 2

Claims 42, 43, 44, 46, and 51 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as their invention. Applicant respectfully traverses this rejection.

Regarding claims 42 and 51, the Examiner indicates that the recitation of “a plant cell or tissue” in element (a) should refer back to the plant cell or tissue susceptible to AIN. Applicant submits that the claims have been amended to recite “said plant cell or tissue”.

Regarding claim 43, the Examiner indicates that the term “mg/l” should be inserted after “0.1” and before “20”. Applicant submits that the claim has been amended to recite “0.1 mg/l to 20 mg/l”.

Regarding claim 44, the Examiner indicates that the term “mg/l” should be inserted after “1” and before “10”. Applicant submits that the claim has been amended to recite “1 mg/l to 10 mg/l”.

Regarding claim 46, the Examiner states that the recitation of “said plant cell or tissue is cultivated on a medium which comprises silver nitrate” is unclear because the plant cell is already on a medium containing silver nitrate. Applicant submits that the claim has been amended to recite that “said plant cell or tissue is selected on a medium which comprises silver nitrate”.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the claim rejections under 35 U.S.C. § 112, second paragraph.

Rejection under 35 U.S.C. § 112, ¶1: Enablement

Claims 42-55 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly not being enabled by the specification. The Examiner contends that the specification, while being enabling for the use of AgNO₃ at a concentration of 1-10 mg/l and for culturing the tissues for 2 to 3 days after inoculation with Agrobacteria with AgNO₃ in the medium, does not reasonably provide enablement for “unspecified conditions which do not contain specific AgNO₃ concentration, specific time durations, and temperature conditions.” Office Action, p. 4. Applicant respectfully traverses this rejection.

Applicant respectfully submits that the Office has not met its burden of establishing that the practice of the claimed invention would require undue experimentation.

Contrary to the Examiner’s allegations, the instant disclosure provides sufficient guidance and direction to enable the practice of the claimed invention without undue experimentation. The specification provides numerous examples of transforming *gramineae* plant cells and tissue susceptible to AIN and demonstrates that AIN can be reduced when transforming *gramineae* cells/tissues by co-cultivating the Agrobacteria with the *gramineae* cells/tissue in a co-cultivation medium which contains an AIN inhibitor consisting of silver nitrate. One skilled in the art would have appreciated that Applicant’s disclosure is not limited to the specific conditions of the examples and, in view of the guidance and direction provided, would have been able to practice the claimed invention employing no more than routine experimentation.

Applicant respectfully submits that the law does not require the Applicant to describe every possible functional variation of the conditions nor does it require the Applicant to “predictably eliminate inoperable embodiments,” as the Examiner contends. Office Action, p. 4. Once the skilled artisan obtains the knowledge that silver nitrate can inhibit AIN, then it is well within the level of skill in the plant transformation arts to define alternative functional conditions without undue experimentation. The Examiner is reminded that “[e]nablement is not precluded by the necessity for some experimentation such as routine screening.” *In re Wands*, 858 F.2d 731, 736-737 (Fed. Cir. 1988). In fact, “a considerable amount of experimentation is permissible, if it is merely routine, or if the specification provides a reasonable amount of guidance with respect to the direction in which the

experimentation should proceed.” *Id.* at 737 (internal citation omitted). The instant specification provides such guidance, via general teachings and more detailed examples. Practicing non-exemplified embodiments of the claimed invention would have required the routine application of varying amounts of silver nitrate to the co-cultivation medium, co-cultivation for differing periods of time, in accordance with the teachings of the disclosure, and limited and systematic routine screening of the cultured plant cells and tissue for the degree of AIN inhibition achieved. Applicant respectfully submits that, even where required, such efforts are well within the level of skill in the art and do not rise to the level of undue experimentation.

For the foregoing reasons, Applicant submits that the instant specification, coupled with what was known in the art at the time of filing, would have provided sufficient guidance to enable one of ordinary skill in the art to practice the claimed invention without undue experimentation. Accordingly, the claimed invention is enabled, and Applicant respectfully requests reconsideration and withdrawal of this rejection under 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 102: De Block *et al.*

Claims 42-46 stand rejected under 35 U.S.C. § 102(b) as being anticipated by De Block *et al.*, Plant Physiol. 91:694-701 (1989) (“De Block”). Applicant respectfully traverses this rejection.

Applicant’s claimed invention is directed to methods for transforming a gramineae plant cell or tissue susceptible to Agrobacterium Induced Necrosis (AIN) with a nucleotide sequence of interest, comprising “co-cultivating *Agrobacterium* comprising a nucleotide sequence of interest with said plant cell or said tissue in a medium which contains an AIN inhibitor consisting of silver nitrate.”

Applicant respectfully submits that De Block does not disclose the claimed subject matter. The reference does not teach or suggest the use of AgNO₃ during co-cultivation to inhibit AIN in *gramineae*.

Accordingly, the claimed invention is not anticipated by De Block. Applicant respectfully requests reconsideration and withdrawal of this rejection under 35 U.S.C. §102(b).

Rejection under 35 U.S.C. § 102(b): Orlikowska *et al.*

Claims 42-44 and 46 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Orlikowska *et al.*, “Influence of Silver Nitrate on Regeneration and Transformation of Roses”, Journal of Applied Genetics (1996), Vol. 37A, pp. 122-125. Meeting Information: International Conference on Perspectives, Warsaw, Poland, September 16-17, 1996. Applicant respectfully traverses this rejection.

As stated above, Applicant’s claimed invention is directed to methods for transforming a gramineae plant cell or tissue susceptible to Agrobacterium Induced Necrosis (AIN) with a nucleotide sequence of interest, comprising “co-cultivating *Agrobacterium* comprising a nucleotide sequence of interest with said plant cell or said tissue in a medium which contains an AIN inhibitor consisting of silver nitrate.”

Applicant respectfully submits that Orlikowska does not disclose the claimed subject matter. The reference does not teach or suggest the use of AgNO₃ during co-cultivation to inhibit AIN in *gramineae*.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection under 35 U.S.C. §102(b).

Rejection for Obviousness-Type Double Patenting

Claims 42-55 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-48 of U.S. Patent No. 6,162,965.

Applicant respectfully maintains that claims 42-55 are patentably distinct from, and not rendered obvious by, the claims of the ‘965 Patent. “Obviousness-type double patenting requires rejection of an application claim when the claimed subject matter is **not patentably distinct** from the subject matter claimed in a commonly owned patent ...” MPEP §804II.B.1 (underlining added). Moreover, “Any obviousness-type double patenting rejection should make clear: (A) The differences between the invention defined by the conflicting claims – a

claim in the patent compared to a claim in the application; and (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.” *Id.*

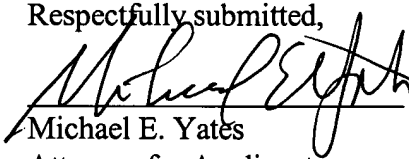
Applicant respectfully submits that the claims in the instant application are not rendered obvious by the claims of the ‘965 Patent. On the contrary, the claims of the ‘965 Patent teach away from the instant claims, since claims of the ‘965 Patent recite “an ethylene inhibitor other than silver nitrate” (see, e.g., claims 33, 34, and 44 of the ‘965 patent).

Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection for obviousness-type double patenting.

CONCLUSION

Pursuant to the foregoing remarks, Applicant respectfully submits that all of the pending claims fully comply with 35 U.S.C. § 112 and are allowable over the prior art of record. No new matter is added by this amendment. Reconsideration of the application and allowance of all pending claims is earnestly solicited. Should the Examiner wish to discuss any of the above in greater detail or deem that further amendments should be made to improve the form of the claims, then the Examiner is invited to telephone the undersigned at the Examiner’s convenience. Entry of the amendments is respectfully requested.

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